RUEN-YEAGER & ASSOCIATES, INC.
ENGINEERS ♦ PLANNERS ♦ SURVEYORS

October 29, 2010

Mr. David Domingo
NPDES Compliance Unit
US EPA Region 10
Mailstop OCE-133
1200 Sixth Avenue, Suite 900
Seattle, WA 98101

Re: Elk River Wastewater Facility-
Written Response to Listed Permit Violations as provided in Enclosure A, Notice of Intent to File Complaint for Clean Water Act Violations
Project No.: P101005

Dear Mr. Domingo:

Ruen-Yeager & Associates, Inc. on behalf of our client, the City of Elk River (City), has prepared this written explanation to help provide clarity to the United States Environmental Protection Agency (US EPA), in regards to the permit violations listed in Enclosures A, B, and C in the Intent to File Complaint letter received September 14, 2010. In addition, it is our intent that this letter will help resolve any questions regarding the City's efforts to remain in compliance with the Permit Conditions.

The following is a short synopsis of typical conditions at the Elk River waste water publicly owned treatment works (POTW) and what is being considered today to address inadequacies.

- Elk River intermittently discharges treated effluent between December and mid June, and operates to attempt to discharge an average of 50,000 gallons per day (2010 average discharge was 44,350 gpd). The facility is located in a heavy snowfall area and experiences winter thaws with rain on snow events which partially surcharge the outfall and additional inflow and infiltration (I&I) problems to the collection system.

- The improvements to the facility in 1989 provided upgrades and retrofitting to existing lagoons. The retrofitting resulted in minimal grades on the inflow and outflow lines, resulting in pipe slopes on the discharge line of 0.22%. During seasonally high flows (rain on snow events, winter thaws, and spring runoff) access to the outfall is restricted. Many items in the original construction plans were deleted (aerators, sampling points, potable water etc.). As-Built drawings were located on October 22, 2010; copies have been made and have been presented to the City (see Exhibit 1).

- A RV dump station was installed and operates, free of charge, typically from mid May/Memorial Day to mid-October. These flows are thought to impact the inflows concentrations and volumes toward the later part of the NPDES discharge season.

Discharges to the RV dump include pump outs of the US Forest Service restrooms and campground restrooms along with traveler wastes. The U.S.F.S. estimates that 4,000-7,000 visitors come to the Elk River area utilizing nearby campgrounds and recreation areas. Wastewater pump outs from these facilities are disposed of at the Elk River RV dump. These discharges, while unmonitored, are thought to represent significant increases in flow volumes and waste concentration when compared with the shoulder seasons when the RV Dump is not open.

- The existing lagoons are non-aerated and are estimated at ~6.4 MM gallons (Lagoon #10 and 2.4 MM gallons (Lagoon #2) each. The City of Elk River Population is estimated at 133 year round residents today. This lagoon volume is several times the typical lagoon volume for a population of 133. This is a breakdown of known connections:

    1. 1-heavily used RV Dump station receiving pump outs from USFS campgrounds and others septic tank services
    2. 1 RV Campground with 1 service connection
    3. 2 restaurants
    4. 1 auto shop
    5. 1 wood shop
    6. 1 County Shop
    7. 1 City shop
    8. 2 Bars
    9. 1 gas station, store, lodge with 10 rooms
    10. 1 Inn with 6 rooms (2 being apartments)
    11. 1 condo complex (8 units), the City was unsure whether these units are served individually, but current thinking is that only one service line serves all 8 units.

  While the population is noted as 133, the City reports that with second home (part time) residents included the population should be noted as ~350, with a U.S.F.S. estimated 4,000-7,000 seasonal visitors. Ruen-Yeager & Associates, Inc. suspects these part-time and seasonal visitors significantly increase the flows that would be normally seen in the smaller noted full time population. Other vacation locations tend to see flows typical of number of connections, not the number of people who call the town home.

- The inlet and outlet structures of both lagoons have settled (see Exhibit 2 and 3) causing discharge to and from the lagoons to be close to or at the lagoon bottom. It is unclear from the engineering drawing which structure is the outlet structure. This increases the suspended solids that are discharged from the zone above the sludge blanket where sludge particles are suspended from each lagoon.

- Chronic sludge buildup at the inlet is a continual maintenance problem that the City addresses twice a year with a Roto-Rooter style line cleaner that they purchased. Sludge volumes measured in 2003 are relatively minimal (generally less than 8") throughout the lagoons but appear to be concentrated at the inlets and outlets. We are presently planning (with the help of Idaho Rural Water Association) to judge sludge depths, dissolved oxygen

concentration at depth and corresponding pH levels. This work is scheduled for the week of November 3, 2010.

- A dechlorinator was installed in 2007 and resulted in a reduction in chlorine residual amounts; it is sized for twice the flow rate and operates in a fully throttled mode to provide for maximum contact of the dechlorination tablets. This model of tablet feeder is reported to provide instantaneous dechlorination. We are evaluating the need for dechlorination contact time and are planning to install an additional sample point closer to the outfall as shown in the original construction plans but apparently not installed in the 1989 project work. We are presently working with the tablet feeder manufacturer (Norweco) to trouble shoot the dechlorination problem.

- Following the installation of the dechlorinator, sampling was performed at a cleanout downstream of the original sample point which resulted in a reduction in TSS levels. A sample point further downstream is thought to be a reasonable means to provide for additional dechlorination contact time.

- The chlorine injection amounts have been adjusted down on numerous times in attempts to reduce total chlorine injected and thus help with the chlorine residual downstream of the dechlorinator. E-coli presence resulted in subsequent sampling (in March & April 2006, December 2006, February 2008, May 2009, and January 2010) and the chlorine levels were increased to prevent this occurrence.

- The distance from the present chlorine sample point to the outfall is ~400-feet, flow through the discharge pipe to the outfall is an average of 35 gpm, and this does not represent plug flow in the 6-inch discharge line. The City is presently planning to install a sample point closer to the outfall to measure chlorine with the thought that approximately 70 minutes of additional dechlorination and out-gassing time exists between the present and planned sample points.

- The receipt of the results from samples sent to the lab for testing has typically been delayed by the distance to the lab, the need to use two separate labs (one in Moscow, Idaho and another in Spokane, Washington), the subsequent posting of the results by both labs via the US Mail service. This has resulted in the monthly DMR's being sent out late. A new procedure is being developed to have the results emailed to the City and Ruen-Yeager & Associates, Inc. to help save time and streamline the process to help complete the DMR's have them reviewed and signed off by the Mayor and sent out on time each month.

- Proposals and cost estimates are being developed for fine bubble linear aeration (diffusion) and installation of a variable elevation outlet draw off pipe. Presently, both of these improvements are focused on Lagoon #2 and are anticipated to be installed in the summer of 2011.

Responses to Specific Permit Violations as noted in **Enclosure A** of Letter Received September 14, 2010 are presented as reference notes as provided in **Enclosure A.**

Enclosure A—Permit Violations – ID-002036-2 (City of Elk River, ID)

Month	Pollutant	Effluent Limitation	Value Reported in DMR	Limit Type	Response to Violation See Key Code at End of Enclosure A
December 2005	TSS	45 mg/l	49 mg/l	Weekly Average	#1
December 2005	TSS	30 mg/l	49 mg/l	Monthly Average	#9
December 2005	TSS	85%	84.3%	Monthly Average	#9
January 2006	BOD	45 mg/l	70 mg/l	Weekly Average	#10
January 2006	BOD	30 mg/l	37.8 mg/l	Monthly Average	#10
January 2006	TSS	45 mg/l	47 mg/l	Weekly Average	#13
January 2006	TSS	30 mg/l	38.5 mg/l	Monthly Average	#13
February 2006	TRC	0.5 mg/l	0.64 mg/l	Monthly Average	#22
March 2006	E. coli	406/100ml	2,400/100ml	Instantaneous Maximum	#11, #12
April 2006	E. coli	406/100ml	2,400/100ml	Instantaneous Maximum	#11, #12
April 2006	TRC	0.5 mg/l	0.6 mg/l	Monthly Average	#20
May 2006	TRC	0.5 mg/l	0.7 mg/l	Monthly Average	#20
November 2006	TSS	30 lbs/day	49.9 lbs/day	Weekly Average	#13
November 2006	TSS	45 mg/l	88 mg/l	Weekly Average	#13
November 2006	TSS	20 lbs/day	45.37 lbs/day	Monthly Average	#13
November 2006	TSS	30 mg/l	80 mg/l	Monthly Average	#13
November 2006	TRC	0.5 mg/l	0.61 mg/l	Monthly Average	#15
December 2006	TSS	30 lbs/day	31.88 lbs/day	Weekly Average	#13
December 2006	TSS	45 mg/l	78 mg/l	Weekly Average	#13
December 2006	TSS	20 lbs/day	26.46 lbs/day	Monthly Average	#13
December 2006	TSS	30 mg/l	64.8 mg/l	Monthly Average	#13
December 2006	E. coli	406/100ml	1,100/100ml	Instantaneous Maximum	#14
December 2006	TRC	0.5 mg/l	0.69 mg/l	Monthly Average	#15
January 2007	TSS	20 lbs/day	27 lbs/day	Monthly Average	#13
January 2007	TSS	30 mg/l	52 mg/l	Monthly Average	#13
January 2007	TSS	45 mg/l	64 mg/l	Weekly Average	#13
January 2007	E. coli	406/100ml	2,400/100ml	Instantaneous Maximum	#16
January 2007	TRC	0.5 mg/l	0.65 mg/l	Monthly Average	#16
February 2007	BOD	45 mg/l	46 mg/l	Weekly Average	#17
February 2007	TSS	30 mg/l	40.9 mg/l	Monthly Average	#18
February 2007	TRC	0.5 mg/l	0.59 mg/l	Monthly Average	#19
March 2007	BOD	85%	74.3%	Monthly Average	#20
March 2007	TRC	0.5 mg/l	0.6 mg/l	Monthly Average	#20
April 2007	TRC	0.5 mg/l	0.71 mg/l	Monthly Average	#20
April 2007	TRC	0.75 mg/l	0.68 mg/l	Weekly Average	#21

Month	Pollutant	Effluent Limitation	Value Reported in DMR	Limit Type	Response to Violation See Key Code at End of Enclosure A
May 2007	TRC	0.07 lbs/day	0.48 lbs/day	Monthly Average	#22
May 2007	TRC	0.07 lbs/day	1.21 lbs/day	Daily Maximum	#22
May 2007	TRC	0.1 mg/l	0.48 mg/l	Monthly Average	#22
May 2007	TRC	0.1 mg/l	1.21 mg/l	Daily Maximum	#22
January 2008	BOD	20 lbs/day	39 lbs/day	Monthly Average	#23
January 2008	BOD	30 mg/l	39 mg/l	Monthly Average	#23
January 2008	BOD	30 lbs/day	39 lbs/day	Weekly Average	#23
January 2008	BOD	85%	84.1%	Monthly Average	#23
January 2008	TRC	0.07 lbs/day	0.24 lbs/day	Monthly Average	#24
January 2008	TRC	0.07 lbs/day	0.33 lbs/day	Daily Maximum	#24
January 2008	TRC	0.1 mg/l	0.24 mg/l	Monthly Average	#24
January 2008	TRC	0.1 mg/l	0.33 mg/l	Daily Maximum	#24
February 2008	BOD	20 lbs/day	36 lbs/day	Monthly Average	#23
February 2008	BOD	30 mg/l	36 mg/l	Monthly Average	#23
February 2008	BOD	30 lbs/day	36 lbs/day	Weekly Average	#23
February 2008	E. coli	126/100ml	536/100ml	Monthly Average	#14
February 2008	E. coli	406/100ml	1,600/100ml	Instantaneous Maximum	#14
February 2008	TRC	0.07 lbs/day	0.27 lbs/day	Monthly Average	#4
February 2008	TRC	0.07 lbs/day	0.33 lbs/day	Daily Maximum	#4
February 2008	TRC	0.1 mg/l	0.26 mg/l	Monthly Average	#4
February 2008	TRC	0.1 mg/l	0.33 mg/l	Daily Maximum	#4
March 2008	BOD	20 lbs/day	28 lbs/day	Monthly Average	#23
March 2008	BOD	30 lbs/day	28 lbs/day	Weekly Average	#23
March 2008	BOD	85%	83%	Monthly Average	#23
March 2008	TRC	0.07 lbs/day	0.25 lbs/day	Monthly Average	#4, #24
March 2008	TRC	0.07 lbs/day	0.25 lbs/day	Daily Maximum	#4, #24
March 2008	TRC	0.1 mg/l	0.25 mg/l	Monthly Average	#4, #24
March 2008	TRC	0.1 mg/l	0.25 mg/l	Daily Maximum	#4, #24
April 2008	BOD	20 lbs/day	82 lbs/day	Monthly Average	#23
April 2008	BOD	30 mg/l	82 mg/l	Monthly Average	#23
April 2008	BOD	30 lbs/day	82 lbs/day	Weekly Average	#23
April 2008	BOD	45 mg/l	82 mg/l	Weekly Average	#23
April 2008	BOD	85%	29%	Monthly Average	#23
April 2008	TRC	0.07 lbs/day	0.26 lbs/day	Monthly Average	#4, #24
April 2008	TRC	0.07 lbs/day	0.3 lbs/day	Daily Maximum	#4, #24
April 2008	TRC	0.1 mg/l	0.26 mg/l	Monthly Average	#4, #24
April 2008	TRC	0.1 mg/l	0.3 mg/l	Daily Maximum	#4, #24
May 2008	TRC	0.07 lbs/day	0.28 lbs/day	Monthly Average	#4, #24

Month	Pollutant	Effluent Limitation	Value Reported in DMR	Limit Type	Response to Violation See Key Code at End of Enclosure A
May 2008	TRC	0.07 lbs/day	0.49 lbs/day	Daily Maximum	#4, #24
May 2008	TRC	0.1 mg/l	0.28 mg/l	Monthly Average	#4, #24
May 2008	TRC	0.1 mg/l	0.28 mg/l	Daily Maximum	#4, #24
June 2008	TRC	0.07 lbs/day	0.17 lbs/day	Monthly Average	#25
June 2008	TRC	0.07 lbs/day	0.17 lbs/day	Daily Maximum	#25
June 2008	TRC	0.1 mg/l	0.17 mg/l	Monthly Average	#25
June 2008	TRC	0.1 mg/l	0.17 mg/l	Daily Maximum	#25
December 2008	TRC	0.07 lbs/day	0.29 lbs/day	Monthly Average	#26
December 2008	TRC	0.07 lbs/day	0.44 lbs/day	Daily Maximum	#26
December 2008	TRC	0.1 mg/l	0.29 mg/l	Monthly Average	#26
December 2008	TRC	0.1 mg/l	0.44 mg/l	Daily Maximum	#26
January 2009	TSS	20 lbs/day	29 lbs/day	Monthly Average	#13
January 2009	TRC	0.07 lbs/day	0.29 lbs/day	Monthly Average	#26
January 2009	TRC	0.07 lbs/day	0.53 lbs/day	Daily Maximum	#26
January 2009	TRC	0.1 mg/l	0.29 mg/l	Monthly Average	#26
January 2009	TRC	0.1 mg/l	0.53 mg/l	Daily Maximum	#26
February 2009	TRC	0.07 lbs/day	0.25 lbs/day	Monthly Average	#26
February 2009	TRC	0.07 lbs/day	0.25 lbs/day	Daily Maximum	#26
February 2009	TRC	0.1 mg/l	0.25 mg/l	Monthly Average	#26
February 2009	TRC	0.1 mg/l	0.25 mg/l	Daily Maximum	#26
March 2009	BOD	85%	83%	Monthly Average	#27
March 2009	TRC	0.07 lbs/day	0.28 lbs/day	Monthly Average	#26
March 2009	TRC	0.07 lbs/day	0.62 lbs/day	Daily Maximum	#26
March 2009	TRC	0.1 mg/l	0.28 mg/l	Monthly Average	#26
March 2009	TRC	0.1 mg/l	0.62 mg/l	Daily Maximum	#26
April 2009	BOD	85%	80%	Monthly Average	#21
April 2009	TRC	0.07 lbs/day	0.36 lbs/day	Monthly Average	#26
April 2009	TRC	0.07 lbs/day	0.55 lbs/day	Daily Maximum	#26
April 2009	TRC	0.1 mg/l	0.36 mg/l	Monthly Average	#26
April 2009	TRC	0.1 lbs/day	0.55 lbs/day	Daily Maximum	#26
May 2009	TSS	20 lbs/day	23 lbs/day	Monthly Average	#18
May 2009	E. coli	126/100ml	170/100ml	Monthly Average	#14
May 2009	TSS	85%	71%	Monthly Average	#18
May 2009	TRC	0.07 lbs/day	0.71 lbs/day	Monthly Average	#15
May 2009	TRC	0.07 lbs/day	0.71 lbs/day	Daily Maximum	#15
May 2009	TRC	0.1 mg/l	0.71 mg/l	Monthly Average	#15
May 2009	TRC	0.1 mg/l	0.71 mg/l	Daily Maximum	#15
January 2010	BOD	20 lbs/day	21 lbs/day	Monthly Average	#1, #7

Month	Pollutant	Effluent Limitation	Value Reported in DMR	Limit Type	Response to Violation See Key Code at End of Enclosure A
January 2010	E. coli	406/100ml	1,600/100ml	Instantaneous Maximum	#6, #8
January 2010	TRC	0.07 lbs/day	0.28 lbs/day	Monthly Average	#4, #6
January 2010	TRC	0.07 lbs/day	0.52 lbs/day	Daily Maximum	#4, #6
January 2010	TRC	0.1 mg/l	0.28 mg/l	Monthly Average	#4, #6
January 2010	TRC	0.1 mg/l	0.28 mg/l	Daily Maximum	#4, #6
February 2010	BOD	20 lbs/day	25 lbs/day	Monthly Average	#1
February 2010	TRC	0.07 lbs/day	0.39 lbs/day	Monthly Average	#4, #6
February 2010	TRC	0.07 lbs/day	0.54 lbs/day	Daily Maximum	#4, #6
February 2010	TRC	0.1 mg/l	0.39 mg/l	Monthly Average	#4, #6
February 2010	TRC	0.1 mg/l	0.39 mg/l	Daily Maximum	#4, #6
March 2010	TRC	0.07 lbs/day	0.33 lbs/day	Monthly Average	#4, #6
March 2010	TRC	0.07 lbs/day	0.46 lbs/day	Daily Maximum	#4, #6
March 2010	TRC	0.1 mg/l	0.33 mg/l	Monthly Average	#4, #6
March 2010	TRC	0.1 mg/l	0.46 mg/l	Daily Maximum	#4, #6
April 2010	TSS	20 lbs/day	21 lbs/day	Monthly Average	#1, #3
April 2010	TRC	0.07 mg/l	0.45 mg/l	Monthly Average	#2, #4
April 2010	TRC	0.07 mg/l	0.98 mg/l	Daily Maximum	#2, #4
April 2010	TRC	0.1 mg/l	0.45 mg/l	Monthly Average	#2, #4
April 2010	TRC	0.1 mg/l	0.98 mg/l	Daily Maximum	#2, #4, #5
May 2010	TSS	20 lbs/day	21 lbs/day	Monthly Average	#1,#3
May 2010	TRC	0.07 lbs/day	0.52 lbs/day	Monthly Average	#2
May 2010	TRC	0.07 lbs/day	1.08 lbs/day	Daily Maximum	#2
May 2010	TRC	0.1 mg/l	0.52 mg/l	Monthly Average	#2
May 2010	TRC	0.1 mg/l	1.08 mg/l	Daily Maximum	#2

Responses to Violation Key

#1 Effluent is drawn off Lagoon #2 bottom and entrains sludge blanket and suspended sludge into treated wastewater

#2 Higher discharges (above 50,000 gpd) were not accommodated by dechlorination tablet feeder adjustment to provide additional contact time. Tablet feeder weir/sluice is to be adjusted when flows exceed 50,000 gpd to provide additional dechlorination contact time.

#3 Higher discharge volumes due to spring weather resulted in entrainment of additional suspended solids from sludge blanket and suspended sludge. Discharge volumes to be monitoring more closely to operate under a more even discharge volume to prevent incorporating suspended sludge into wastewater effluent.

#4 Chlorination levels are elevated because of concerns regarding coliforms and E Coli counts. Dechlorination tablet feeder appears to require adjustments based on flow fluctuations. Tried higher strength tablets, adjusted the sluice gates and inlet baffle to increase contact time.

#5 Chlorine residual is conditioned upon dechlorination tablet contact time and out gassing time in contact chamber and discharge piping. This appears to vary based on the varying discharge flow volumes.

#6 Ruptured diaphragm in chlorine pump setup, installed a new pump and rebuilt old pump for use as a standby backup unit. Letter sent to US EPA on January 22, 2010, indicating time line for break down and repairs.

#7 First discharges of season entraining suspended solids near outlet.

#8 City of Elk River contacts EPA hotline to report E Coli as provided by testing laboratory.

#9 Heavy rainfall events, snowmelt, and heavy runoff.

#10 Solids settling and sludge buildup at inlet to lagoons, flush piping and solids away from inlets in early January, possible short circuiting from flushing operations during discharging of treated effluent.

#11 Solids again building up, flush inlets in March, again possible short circuiting.

#12 Heavy rain and snow melt in April.

#13 High flows, probable entrainment of suspended solids in hinder area above sludge blanket, solids washout. Back to back heavy winters.

#14 Lowered chorine injection levels to try to meet TRC limits, resulted in incomplete disinfection-inactivation and E Coli levels above permit conditions.

#15 Adjusted chlorine injection levels up to prevent E Coli conditions, unable to dechlorinate to permit levels and kill bacteria. Probably due to high TSS conditions.

#16 Problems with chlorine pump, changed pump too little chlorine then followed with too much injection.

#17 Minor excursion on BOD probably related to high TSS levels.

#18 High snowfall and snow melt reported in operator log, probable entrainment of suspended solids and sludge blanket in discharge stream.

#19 Probable chlorine pump problems not explicitly detailed by operator but consistent with other high TRC events.

#20 Noted as high runoff and snow melt period. TRC is slightly elevated in comparison with some previous months; attempts by operator to chlorinate at a high enough rate to disinfect but not have high residual are still out of compliance.

#21 Appears that the reported value is below the effluent limit in this case, maybe a transposition of numbers.

#22 It appears that chlorine injection was not adjusted to lower flows caused by drop in snowmelt, and drop in precipitation following high precipitation events.

#23 BOD in secondary lagoon is probably related to low dissolved oxygen and cold temperatures from severe winter weather. Upon initial discharges we have limited circulation.

#24 Extremely heavy winter with 175% normal snow, colder temperatures, and frequent winds. Chlorine concentrations were likely higher based on low temperatures, increased chlorine concentrations needed to gain adequate contact time. Heavy winter conditions remained from December through May.

#25 Chlorine residual dropping but still out of compliance.

#26 Operator dosing chlorine at levels adequate for disinfection but unable to achieve adequate dechlorination to achieve permit levels. Tablet feeder adjusted.

#27 BOD in secondary lagoon is probably related to low dissolved oxygen and cold temperatures from severe winter weather.

Ruen-Yeager & Associates, Inc. as the City of Elk River's Representative, has reviewed the operator notes, system parameters, performed two site visits, and developed a concept solution for addressing the violations detailed in Enclosure A and inadequacies noted in previous site evaluations and operator comments.

We have provided our understanding of environmental and operational conditions present, that probably contributed to the excursions from the NPDES permit limitations reported in the City of Elk River POTW DMR's and as noted listed as violations in Enclosure A.

Responses to violations noted in Enclosures B and C are addressed later in this document.

It is our intent, to further evaluate the POTW lagoons this fall by sludge judging, and measuring DO and pH. After this data has been collected we will evaluate the Air Diffusion System (ADS) proposal for aerating Lagoon #2 , in addition we will design a variable elevation outlet structure for installation in Lagoon #2, install the downstream sample point, trouble shoot the dechlorinator tablet feeder, and clean out the chorine contact chamber.

Upon a favorable evaluation of the ADS proposal and analysis of the data set collected this fall from the lagoons, the City of Elk River together with Ruen-Yeager & Associates, Inc. and subsequently IDEQ-Lewiston, will propose system modifications to address chronic TSS and TRC issues, and also address the occasional, but persistent BOD and E-Coli permit excursions. If fine bubble aeration is suitable as proposed by ADS, and affordable, this system should also help prepare the City of Elk River for future NPDES Permit conditions.

Timeline for Addressing Conditions Responsible for Permit Violations noted in Enclosure A

Fall 2010- Early Winter 2011

1. Complete system analysis and provide conceptual designs for addressing problems.
2. Present findings to City, prioritize proposals and effectiveness, and make preliminary decisions on course of action.

Winter 2011- Late Winter 2011

1. Monitor effluent and adjust chlorination and dechlorination and sample farther downstream for additional contact time.
2. Develop Final Design and Cost Estimates for selected improvements
3. Develop and submit plans to IDEQ for approval
4. Solicit bids or select contractor

Spring 2011

1. Prepare for system improvements including power, compressor building location and remodel, and lagoon drawdown if necessary.

Summer 2011

1. Install Improvements

Fall 2011

1. Monitor improvements adjust compressors and recirculation pump.

Costs Estimates to Address Violations noted in Enclosure A

Sludge Judging, DO, and Ph data collection and analysis with help of Idaho Rural Water Association- **$1,500.**

Analysis system modifications and prioritize solutions to address violations, and research funding options- **$4,000.**

Aeration-fine bubble diffusion, linear system, Lagoon #2 as proposed by ADS, note list (#1) of exclusion items- **$22,000-$25,000. (see proposal)**

Exclusion Items-piping, posts, equipment, shipping, additional compressor, survey, coordination, power, compressor enclosure, recirculation pump, recirculation piping and power, backup compressor, and slide gate repairs- **$18,500. (see exclusion list)**

Engineering, design submittals, and testing, construction observation, as-builts- **$16,000. (rough estimate)**

Total rough estimated cost $65,000

Enclosure B- Response to Violations for Late Submittals

The City of Elk River presently contracts with Anatek Labs in Moscow, Idaho for routine sample collection and analysis. Anatek Labs-Moscow sends some of the samples to another Anatek facility in Spokane, Washington for analysis. Results are then sent back to Moscow and then mailed to the City of Elk River. The typical turnaround time results in receipt of the results on or just slightly before the DMR's are due. To further complicate the City's effort to report on time is that they presently have a corrupted electronic DMR form and have been reluctant to use the electronic form because of averaging and totaling errors. The newest forms available also do not seem to work on the older computer available to the operator.

The City, Anatek, and Ruen-Yeager & Associates, Inc. will work together over the next 60 days to streamline reporting, update, and cross check the DMR's in a process that will include, emailing results to the City and Ruen-Yeager & Associates, Inc. as soon as the results are available, installing the new electronic reporting form on a new computer at Elk River City Hall, and having Ruen-Yeager & Associates, Inc. review the results from the lab and oversee the DMR completion prior to submittal to EPA. These efforts will help to verify that all information is reported and excursions are noted and follow-up notification is properly executed, the reports are signed by the Mayor and subsequently submitted in a timely fashion to meet the submittal deadline.

After the 60-day trial period, Ruen-Yeager & Associates, Inc. will continue to work with the City and their operator to identify any areas of confusion and provide oversight on submittals and

reporting of the DMRs. It is the intent that within 6-9 months the City would be experienced and comfortable enough to complete the forms without outside help. Ruen-Yeager & Associates, Inc. would remain available for consultation should this be necessary to address issues that may come up as requested by the City.

A violation by violation response to the Late Submittal Violations included in Enclosure B has not been prepared with the understanding that the rural nature, multi laboratory analysis, and use of standard mail has protracted delivery of results to the City thus resulting in late submittals.

Enclosure C-Reporting Violations

The noted violations listed in Enclosure C are related to what appears to be improper reporting on pollutant values for nitrogen and phosphorus not required to be reported but listed in DMR's from November 2006-May 2007. This appears to have been an area of confusion for the City and has since been clarified. The City will continue to **NOT** report values for Nitrogen or Phosphorus until required to do so, we apologize for the confusion.

Conclusion

This letter response has been prepared by Ruen-Yeager & Associates, Inc. with the assistance of the City of Elk River operator, City administrative staff, IDEQ-Lewiston, and through document research and site visits. Ruen-Yeager & Associates, Inc. has relied on information received from the City and others in preparing this response.

In a meeting, on Tuesday October 26, 2010 in Elk River, with City staff, POTW operator, Ruen-Yeager & Associates, Inc., and the Mayor a draft of this letter was presented and discussed in detail. Revisions and edits were suggested by the City and incorporated into this Final version.

If you should find the need for further explanation or additional information please do not hesitate to contact me at 208 292 0820.

Sincerely,

RUEN-YEAGER & ASSOCIATES, INC.

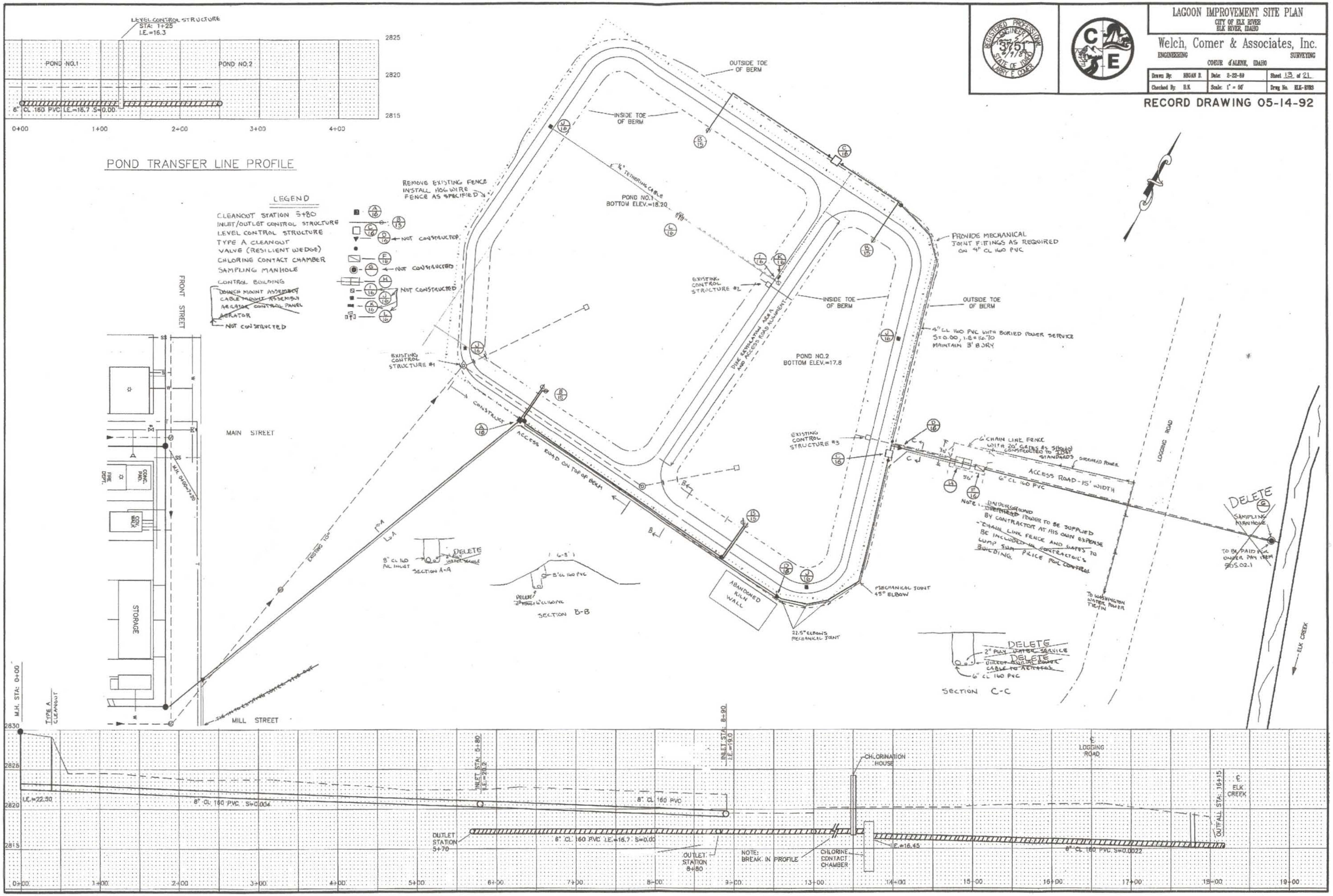
John J. Karpenko P.E.
Senor Project Engineer

CITY OF ELK RIVER

Jim Martin
Mayor

encl: (4) Exhibit 1, Exhibit 2, Exhibit 3, and Exclusion List

JJK/ap
p:\2010\p101005_elkgeneral\99_correspondence\02_out\part 1 part 2 reponse to epa notice of permit violations 10-29-10 draft.doc



LAGOON IMPROVEMENT SITE PLAN
CITY OF ELK RIVER
ELK RIVER, IDAHO
Welch, Comer & Associates, Inc.
ENGINEERING
SURVEYING
COEUR d'ALENE, IDAHO
Drawn By: REGAN B.
Date: 2-22-89
Sheet 13 of 21
Checked By: B.K.
Scale: 1" = 50'
Drwg No. ELK-RVR3
RECORD DRAWING 05-14-92
REGISTERED PROFESSIONAL ENGINEER
3751
STATE OF IDAHO
LARRY E. COMER
POND TRANSFER LINE PROFILE
LEVEL CONTROL STRUCTURE
STA: 1+25
I.E.=16.3
POND NO.1
POND NO.2
8" CL 160 PVC I.E.=16.7 S=0.00
LEGEND
CLEANOUT STATION 5+80
INLET/OUTLET CONTROL STRUCTURE
LEVEL CONTROL STRUCTURE
TYPE A CLEANOUT
VALVE (RESILIENT WEDGE)
CHLORINE CONTACT CHAMBER
SAMPLING MANHOLE
CONTROL BUILDING
WINCH MOUNT ASSEMBLY
CABLE MOUNT ASSEMBLY
AERATOR CONTROL PANEL
AERATOR
NOT CONSTRUCTED
FRONT STREET
MAIN STREET
MILL STREET
STORAGE
FIRE DEPT.
REMOVE EXISTING FENCE
INSTALL HOG WIRE
FENCE AS SPECIFIED
OUTSIDE TOE OF BERM
INSIDE TOE OF BERM
POND NO.1
BOTTOM ELEV.=18.20
POND NO.2
BOTTOM ELEV.=17.8
EXISTING CONTROL STRUCTURE #1
EXISTING CONTROL STRUCTURE #2
EXISTING CONTROL STRUCTURE #3
PROVIDE MECHANICAL JOINT FITTINGS AS REQUIRED ON 4" CL 160 PVC
4" CL 160 PVC WITH BURIED POWER SERVICE
S=0.00, I.E.=16.70
MAINTAIN 3' BURY
ACCESS ROAD ON TOP OF BERM
ABANDONED KILN WALL
MECHANICAL JOINT 45° ELBOW
22.5° ELBOWS MECHANICAL JOINT
6' CHAIN LINK FENCE WITH 20' GATES AS SHOWN
ACCESS ROAD - 15' WIDTH
6" CL 160 PVC
LOGGING ROAD
DELETE
SAMPLING MANHOLE
TO BE PAID UNDER PAY ITEM 905.02.1
TO WASHINGTON WATER POWER TIE-IN
ELK CREEK
SECTION A-A
SECTION B-B
SECTION C-C
2" POLY WATER SERVICE
6" CL 160 PVC
M.H. STA: 0+00
TYPE A CLEANOUT
I.E.=22.50
8" CL 160 PVC S=0.004
INLET STA: 5+80 I.E.=20.2
INLET STA: 8+90 I.E.=19.0
CHLORINATION HOUSE
OUTLET STATION 5+70
8" CL 160 PVC I.E.=16.7 S=0.00
OUTLET STATION 8+80
NOTE: BREAK IN PROFILE
CHLORINE CONTACT CHAMBER
I.E.=16.45
8" CL 160 PVC S=0.0022
OUTFALL STA: 16+15
ELK CREEK

Outlet Structures Lagoon # 2


Elk Creek Basi
Fir St
N 1st St
Pine St
N Front St
Lagoon #1
Lagoon #2
Elk River
Elk River, ID 83827
Inlet
Outlet
Taft St
S 2nd St
S 1st St
Main St
Dent Rd
8
S 3rd St
Mill St
Cedar St
Image © 2010 DigitalGlobe
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© 2010 Google
Imagery Date: Jul 7, 2003
46°47'03.11" N 116°10'28.47" W elev 2825 ft
Eye alt 6079 ft
Google

EXHIBIT 3

Additional Costs-Exclusion List

1. Backhoe approximately three days-$1,500
2. Site Survey work , laser level rental- $1,200
3. Blower shelter (either at existing Chlorination –flume building or standalone- $3,500
4. Electrical panel, outlets, starter etc for blower and service outlets(verify electrical as shown on plans at lagoons and chlorination Building) $1,000-$4,000
5. Electrical for recirculation pump $500
6. Recirculation pump $500
7. Recirculation line Lagoon 2-Lagoon 1, or use existing (possible need to field verify functionality)-$1,500
8. Concrete slab or footings for standalone shelter- $1,000
9. 60-ft 2" galvanized piping, couplings and connectors for heat dissipation prior to manifold piping, additional length of pipe is compressor location moved to existing chlorination porch- $500
10. ~100 tee posts for header support (need to verify size, length, dimensions gauge etc.$1,000
11. Shipping and off loading- $1,500
12. HDPE butt fusion machine rental three days+/- $1,350
13. HCL gas (need specifications)- $150

Subtotal $18,200